

Claims

1. A method of selectively recovering nodes on a computer network having a plurality of paths connected to adapters on at least one host computer for
5 managing input/output (I/O) requests between the host computer and fibre channel devices (FIDs) having a plurality of logical units (LUNs) associated therewith, comprising:

detecting an exception condition;
recovering only the adapters, FIDs and LUNs within the scope of
10 the exception condition; and
issuing I/O requests to adapters, FIDs and LUNs during recovery that are not within the scope of the exception condition.

2. The method of claim 1, wherein said recovering further comprises:
15 if the adapter needs to be recovered, recovering the adapter before recovering the FIDs and LUNs associated with the adapter.

3. The method of claim 2, wherein said recovering further comprises:
if the FID needs to be recovered, recovering the FID before
20 recovering the LUNs associated with the FID.

4. The method of claim 3, wherein said recovering further comprises:
recovering the LUNs only if the FID and adapter associated with the
LUNs are not in need of recovery.
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5. The method of claim 1, further comprising:
detecting if an adapter is in an unrecoverable state; and
if the adapter is unrecoverable, aborting recovery on the adapter and
the FIDs and LUNs associated with the adapter.
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6. The method of claim 5, further comprising:

setting an adapter state to an unrecoverable state if adapter recovery is not successful.

5 7. The method of claim 1, further comprising:

detecting if a FID is in an unrecoverable state; and

if the FID is unrecoverable, aborting recovery on the FID and the LUNs associated with the FID.

10 8. The method of claim 7, further comprising:

setting the FID state to an unrecoverable state if the FID recovery is not successful.

9. The method of claim 1, further comprising:

15 setting the LUN state to an unrecoverable state if the LUN recovery is not successful.

10. The method of claim 1, further comprising:

20 if recovering an adapter, FID, or LUN is unsuccessful, retrying the recovery; and

if the recovery has been retried a number of times, marking the adapter, FID, or LUN as unrecoverable.

25 11. The method of claim 1, wherein the computer network includes a fabric switch.

12. A method of recovering nodes in a hierarchical computer network, comprising:

detecting an exception condition;

recovering only the nodes within the scope of the exception condition ; and

issuing input/output (I/O) requests to nodes during recovery that are not within the scope of the exception condition.

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13. The method of claim 12, wherein the computer network has a hierarchical structure and said recovering is processed sequentially starting from the top of the hierarchy.

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14. The method of claim 13, further comprising:

detecting if a node on the network is in an unrecoverable state;

if the node is unrecoverable, aborting recovery on the node and all nodes beneath the unrecoverable node in the hierarchical structure.

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15. The method of claim 13, further comprising:

if recovery of a node is unsuccessful, retrying the recovery; and

if the recovery has been retried a number of times, marking the node as unrecoverable.

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16. The method of claim 13, further comprising, setting the node state to an unrecoverable state if recovery is not successful.

17. A computer system for recovering devices on a computer network, comprising:

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at least one computer connected on a fibre channel network;

at least one adapter associated with the computer managing paths on the fibre channel network to multiple devices connected on the network; and

an operating system resident on the computer programmed to detect exception conditions, to recover only the adapters or devices within the scope of

the exception condition, and to issue input/output (I/O) to devices that are not within the scope of the exception condition.

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